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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/759,912 | 01/16/2004 | Elida Isabel de Obaldia | 12411.0030;TI-35769 | 1519 |
| 23494 | 7590 | 06/17/2005 | EXAMINER | |
| TEXAS INSTRUMENTS INCORPORATED | | | BARAN, MARY C | |
| P O BOX 655474, M/S 3999 | | | ART UNIT | PAPER NUMBER |
| DALLAS, TX 75265 | | | 2857 | |

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.D

Office Action Summary

Application No.

10/759,912

Applicant(s)

DE OBALDIA ET AL.

Examiner

Mary Kate B. Baran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All. b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it exceeds 150 words.

Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities: on page 11 [0035] line 1, "Figure2" should be – Figure 2 –.

Appropriate correction is required.

Claim Objections

3. Claims 2, 17 and 32 are objected to because of the following informalities: claim 2 page 12 line 1, claim 17 page 13 line 1 and claim 32 page 15 line 1, "implemented on-chip" should be – implemented in an on-chip –. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Referring to claims 1, 16 and 29, the phrase "testing a power amplifier and oscillator frequency" is indefinite, because it is not clear if the method and apparatus are testing a power amplifier, oscillator frequency, or both.

5. Claims 2, 14 and 15 provide for the use of the claimed method implemented in an ASIC, an FPGA and on-chip integral with said integrated circuit based transmitter, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 17, 27, 28, 32, 44 and 45 provide for the use of the claimed apparatus implemented in an ASIC, an FPGA and on-chip integral with said integrated circuit based transmitter, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 2, 14, 15, 17, 27, 28, 32, 44 and 45 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the

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process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 7, 10-13, 16-19, 21, 24-26, 29-34, 36-38 and 41-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Limberg (U.S. Patent No. 3,798,376).

Referring to claims 1, 16 and 29, Limberg teaches an apparatus for testing a power amplifier (see Limberg, column 22 lines 38-47) and oscillator frequency in an integrated circuit based transmitter (see Limberg, column 3 lines 6-11), comprising: a comparator having a first input and a second input, wherein a power amplifier output signal is connected to said first input and a threshold signal is connected to said second input, said comparator operative to produce a square wave signal, wherein said threshold being adjusted such that said square wave signal is generated only when said power amplifier output voltage amplitude is about a predetermined level (see Limberg, column 8 lines 20-30); and a frequency adapted to receive the square wave signal output of said comparator and adapted to divide the frequency of said square wave to

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within a frequency range sufficiently below that of said oscillator frequency (see Limberg, column 6 lines 6-32).

Referring to claims 2, 17 and 32, Limberg teaches that said method is adapted to be implemented on-chip integral with said integrated circuit based transmitter (see Limberg, column.

Referring to claims 3, 18 and 33, Limberg teaches that a frequency count of zero or significantly below an expected level indicates a failure of said power amplifier to generate an acceptable output power level (see Limberg, column 29 lines 20-27).

Referring to claims 4, 19 and 34, Limberg teaches that said threshold is dynamically configurable (see Limberg, column 30 lines 7-13).

Referring to claims 6, 21, 36 and 37, Limberg teaches that said step of dividing comprises the step of dividing said square wave to a sufficiently low frequency to permit frequency counting using relatively low cost external test equipment (see Limberg, column 6 lines 6-32).

Referring to claims 7 and 38, Limberg teaches that said step of dividing comprises the step of dividing said square wave to sufficiently low frequency thereby

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permitting frequency counting using existing on-chip processing means adapted to perform frequency counting (see Limberg, column 11 lines 22-36).

Referring to claims 10, 24 and 41, Limberg teaches applying said test output signal to a relatively low cost external frequency counter to verify compliance with a desired oscillator frequency (see Limberg, column 11 lines 22-36).

Referring to claim 11, Limberg teaches the step of applying said test output signal to an on-chip software/hardware based block adapted to verify compliance with a desired oscillator frequency range by means of frequency counting (see Limberg, column 11 lines 22-36).

Referring to claims 12, 25 and 42, Limberg teaches that said oscillator frequency signal comprises carrier signal only (see Limberg, column 5 line 65 – column 6 line 1).

Referring to claims 13, 26 and 43, Limberg teaches that said oscillator frequency signal comprises carrier signal combined with a modulating signal (see Limberg, column 23 lines 48-66).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 15, 27, 28, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limberg (U.S. Patent No. 3,798, 376) in view of Phillips et al. (U.S. Patent No. 5,867,535) (hereinafter Phillips).

Referring to claims 14, 27 and 44, Limberg teaches all the features of the claimed invention except that the integrated circuit is an ASIC.

Phillips teaches that the integrated circuit is an ASIC (see Phillips, column 7 lines 61-65).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Limberg to include the teachings of Phillips because including the ASIC would have allowed the skilled artisan to test the electrically isolated components (see Phillips, column 7 line 65 – column 8 line 1).

Referring to claims 15, 28 and 45, Limberg teaches all the features of the claimed invention except that the integrated circuit is an FPGA.

Phillips teaches that the integrated circuit is an FPGA (see Phillips, column 8 lines 32-37).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Limberg to include the teachings of Phillips because including the FPGA would have allowed the skilled artisan to test the electrically isolated components (see Phillips, column 7 line 65 – column 8 line 1).

9. Claims 8, 22 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limberg (U.S. Patent No. 3,798, 376) in view of Azar (U.S. Patent No. 6,450,184).

Referring to claims 8, 22 and 39, Limberg teaches all the features of the claimed invention except for dividing said square wave by 128 to yield approximately a 19 MHz test output signal.

Azar teaches dividing said square wave by 128 to yield approximately a 19 MHz test output signal (see Azar, column 4 lines 23-27).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Limberg to include the teachings of Azar because dividing the square wave by a multiple of two would have allowed the skilled artisan to display the frequency of the vibrations (see Azar, column 4 lines 32-35).

10. Claims 9, 23 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limberg (U.S. Patent No. 3,798, 376) in view of Genest (U.S. Patent No. 6,066,990).

Referring to claims 9, 23 and 40, Limberg teaches all the features of the claimed invention except that the division ratio for said square wave is divided is dynamically configurable.

Genest teaches that the division ratio for said square wave is divided is dynamically configurable (see Genest, Abstract).

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It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Limberg to include the teachings of Genest because having a dynamically configurable division ratio would have allowed the skilled artisan to test all channels (see Genest, column 6 lines 5-7).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) Kotowski teaches a method and apparatus for controlling programmable hysteresis.

(b) Zinke et al. teach a circuit arrangement for evaluating the output signal of an active sensor.

(c) Deas et al. teach a high precision receiver with skew compensation.

(d) Dexter teaches a radio system including mixer device and switching circuit and method having switching signal feedback control for enhanced dynamic range and performance.

(e) Ranganath teaches an inverter for an electronic ballast having independent start-up and operational output voltages.

(f) Dent teaches an adaptively self-correcting modulation system and method.

(g) McMullan, Jr. et al. teach a method and apparatus for RF data transfer in a CATV system.


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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Kate B. Baran whose telephone number is (571) 272-2211. The examiner can normally be reached on Monday - Friday from 9:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

17 May 2005


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